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L Number	Hits	Search Text	DB	Time stamp
5	. 0	jp2002310132	USPAT;	2004/07/26 11:11
			US-PGPUB;	
			EPO; JPO;	
			DERWENT	
6	1	jp2002310132a	USPAT;	2004/07/26 11:11
		"	US-PGPUB;	
			EPO; JPO;	
			DERWENT	
7	41	(viscous or fluid or grease or oil or hydraulic) with (damper or	USPAT;	2004/07/26 11:16
		dampener) and 16/221-392.ccls.	US-PGPUB	
9	4	l ' '	USOCR	2004/07/26 11:17
		(damper or dampener) and 16/221-392.ccls.		
8	42		USPAT;	2004/07/26 11:19
		(damper or dampener) and 16/221-392.ccls.	US-PGPUB	
10	5	(viscous or fluid or grease or oil or liquid or hydraulic) with	USPAT;	2004/07/26 11:20
	_	(damper or dampener) and 16/303.ccls.	US-PGPUB	
11	21		USPAT:	2004/07/26 11:23
		16/303.ccls.	US-PGPUB	
12	1468	(viscous or silicone or fluid or grease or oil or liquid or hydraulic)	USPAT:	2004/07/26 11:24
1		same (damper or dampener) same (rotating or rotary)	US-PGPUB	
13	778	· · · · · · · · · · · · · · · · · · ·	USPAT;	2004/07/26 11:25
		with (damper or dampener) with (rotating or rotary)	US-PGPUB	
14	54		USPAT;	2004/07/26 11:26
		with (damper or dampener) with (rotating or rotary) and (cam\$6 or	US-PGPUB	
		step or stepped) with end with (shaft or plunger or rotors!)		
	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		·

	149	("5678786"	USPAT;	2004/07/25 13:17
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-	2 (("6530121") or ("d486	6833")).PN.	USPAT;	2004/07/25 13:04
	_ ((3333 12)) 31 (3333	//	US-PGPUB	
-	1 6530121.URPN.		USPAT	2004/07/25 13:07
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_	9 \ (US-6745436-\$ or US	6-6295358-\$ or US-6292980-\$ or	USPAT	2004/07/25 13:09
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	US-5715575-\$ or US-	-5704094-\$ or US-5697124-\$).did.		

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	\ *				
-		58	(rotors! or first adj rotor same second adj rotor) same (damper or	USPAT;	2004/07/25 13:32
1.			dampener) same (fluid or viscous)	US-PGPUB;	
	1		,	EPO; JPO;	
				DERWENT	
-		1	2004-399454.NRAN.	DERWENT	2004/07/25 13:23
-		5	(rotors! or first adj rotor same second adj rotor) same (damper or	USPAT;	2004/07/25 13:35
			dampener) same (fluid or viscous) and nifco.asn.	US-PGPUB;	
		i		EPO; JPO;	
	ļ			DERWENT	
-	1	2	(US-4685232-\$).did. or (US-20030228918-\$).did. or	USPAT;	2004/07/26 05:50
	l		(JP-2004176806-\$).did.	US-PGPUB;	
				EPO	
_		198	379/433.13.ccls.	USPAT;	2004/07/26 05:56
				US-PGPUB;	
1				EPO	
-		59	455/\$.ccls. and (damper or dampener)	USPAT;	2004/07/26 05:53
				US-PGPUB;	1
				EPO	
-		4	379/433.13.ccls. and (viscous or fluid or grease or oil or	USPAT;	2004/07/26 05:59
			hydraulic) with (damper or dampener or check or closure or	US-PGPUB;	
			shcok adj absorb\$4)	EPO	
-		1	cellphone and (viscous or fluid or grease or oil or hydraulic) with	USPAT;	2004/07/26 05:59
ļ	•		(damper or dampener or check or closure or shook adj absorb\$4)	US-PGPUB;	
1	-			EPO	
_		150	(viscous or fluid or grease or oil or hydraulic) with (damper or	USPAT;	2004/07/26 06:00
			dampener) same hinge	US-PGPUB;	
			•	EPO	
-		14	(viscous or fluid or grease or oil or hydraulic) with (damper or	USPAT;	2004/07/26 06:11
Ì			dampener) same hinge same rotor	US-PGPUB;	
				EPO	
-		798	(viscous or fluid or grease or oil or hydraulic) with (damper or	USPAT;	2004/07/26 06:11
			dampener) same rotor	US-PGPUB;	
				EPO; JPO;	
				DERWENT;	
		1		IBM_TDB	
-		29	(viscous or fluid or grease or oil or hydraulic) with (damper or	USPAT;	2004/07/26 09:49
			dampener) same rotor and 16/\$.ccls.	US-PGPUB;	
				EPO; JPO;	
				DERWENT;	
				IBM_TDB	0004/07/004440
-		46	(viscous or fluid or grease or oil or hydraulic) with (damper or	USPAT;	2004/07/26 11:16
			dampener) and 16/221-392.ccls.	US-PGPUB;	
				EPO; JPO;	
				DERWENT;	
			9 1 1 2 2 3 96 73	IBM_TDB	2004/07/26 07:50
-		7	(viscous or fluid or grease or oil or hydraulic) with (damper or	USPAT;	2004/07/26 07:52
			dampener) and 16/330,303.ccls.	US-PGPUB;	
				EPO; JPO;	
				DERWENT;	
			/ !	IBM_TDB	2004/07/26 07:53
-		29	(viscous or fluid or grease or oil or hydraulic) with (damper or	USPAT;	2004/01/20 07:53
			dampener) same rotor and 16/\$.ccls.	US-PGPUB; EPO; JPO;	
		1			
				DERWENT;	
			(discourse of fluid on groups as all as budged lie) with (dames as	IBM_TDB USPAT:	2004/07/26 09:17
-		53	(viscous or fluid or grease or oil or hydraulic) with (damper or	US-PGPUB;	2004/01/20 08.17
			dampener) with rotary and 16/\$.ccls.	EPO; JPO;	
		1		DERWENT;	
		14-	(AG/EA) CCLC	IBM_TDB USPAT;	2004/07/26 11:11
-		117	(16/54).CCLS.	US-PGPUB	2004/01/20 11.11
		0400	(viceous or fluid or liquid or grosses or oil or hydroulis) with	USPAT;	2004/07/26 09:52
-		2198	(viscous or fluid or liquid or grease or oil or hydraulic) with (damper or dampener) with (rotor or rotary or rotating or rotate)	US-PGPUB;	200-701720 03.02
			(uamper or uampener) with frotor or rotally or rotating or rotate)	EPO; JPO;	CHC
				DERWENT;	
		1		IBM TDB	
L		L			-L L

	167	(viscous or fluid or liquid or grease or oil or hydraulic) with	USPAT;	2004/07/26 09:53
		(damper or dampener) with (rotor or rotary or rotating or rotate)	US-PGPUB;	
		same (coaxial\$5 or concentric\$5)	EPO; JPO;	
		•	DERWENT;	
			IBM_TDB	
-	136	(viscous or fluid or liquid or grease or oil or hydraulic) with	USPAT;	2004/07/26 09:53
		(damper or dampener) with (rotor or rotary or rotating or rotate)	US-PGPUB;	
		same (coaxial\$5 or concentric\$5) with (rotor or rotary or rotating	EPO; JPO;	
		or rotate)	DERWENT;	
		() () () () () () () () () ()	IBM_TDB USPAT:	2004/07/26 09:54
-	2	(viscous or fluid or liquid or grease or oil or hydraulic) with (damper or dampener) with (rotor or rotary or rotating or rotate)	US-PGPUB;	2004/01/20 03.34
		same (coaxial\$5 or concentric\$5) with (rotor or rotary or rotating	EPO; JPO;	
		or rotate) same stepped	DERWENT:	
		of Totale) same stepped	IBM TDB	-
_	16	(viscous or fluid or liquid or grease or oil or hydraulic) with	USPAT;	2004/07/26 09:58
		(damper or dampener) with (rotor or rotary or rotating or rotate)	US-PGPUB;	
		and (rotor or rotary or rotating or rotate) and stepped same rotor	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
- '	0	6142269.pn. and (spring or bias\$4)	USPAT;	2004/07/26 09:59
			US-PGPUB;	
			EPO; JPO;	
			DERWENT;	
		0.4.40000 NIDDN	IBM_TDB	2004/07/26 00:50
-	0	6142269.URPN.	USPAT USPAT	2004/07/26 09:59 2004/07/26 09:59
-	3	("2192876" "4768630" "4842106").PN.	LOSEAL	2004/01/20 09.39

Butler, Douglas

PLUS 7/26/04

From:

PLUS

Sent:

Monday, June 14, 2004 11:01 AM

To:

Butler, Douglas

Subject:

PLUS Results for 10662348

Here are the PLUS search results for 10662348.

This search was prepared by the staff of the Scientific and Technical Information Center, SIRA. If you have questions or comments about this search, please reply via email to PLUS@uspto.gov.

















10662348_CLSTITLES

10662348_WDS.txt

PLUS Search Results for S/N 10662348, Searched June 14, 2004

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

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5418414
5481585
5518493
5681153
5706658
5804935 5844342
5983635
6005358
6109864
6133664
6200117
6210103
6210103 6226988
4249896
4257280
4267647
4274804
4276511
4292008
4319398 4327299
4327299
4379984
4388579).pn.
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4407258
4409505
4425883
4437213 4445822
4447220
4450813
4455499

4461534 4468604	
4477760 4479404	
4481766	
4491340	
4497167	
4500269 4525123	
4531079	
RE31965	
4534754	
4535373	
4544317 4553903	
4557679	
4562397	
4562805	
4562803	
4564329 4570768	
4575677	
4577974	
4580019	
4611464	
4616165 4626727	
4756284	
4773210	
4784196	
4795315	
4830570 4831827	
4837474	
4847555	
4853572	
4854834 4866323	
4880354	
4881699	
4900292).pn.	
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4922406 4955791	
4986740	
5003686	
5015149	
5176261 5180225	
5180225	
5215436	
5216339	
5228828	
5231284 5231342	
5237247	
5249918	
5251833	
5252039	

Most Frequently Occurring Classifications of Patents Returned From A Search of 10662348 on June 14, 2004

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Original Classifications
    123/216
    310/49R
  4
  4
    318/254
  3
     60/487
  3
    310/90
  3
    360/97.03
     29/598
  2
  2
    318/139
  2
    318/466
 2
    318/701
 2
    322/32
 2
    324/161
 2
    415/112
 2
    415/115
 2
    417/204
 2
    417/42
    433/132
Cross-Reference Classifications
 6 310/268
 6 310/42
 5 318/254
 4 123/242
 4 310/112
 4
   310/114
 4
    310/67R
 4
    360/98.07
    360/99.08
 3
    91/485
 3
   310/198
 3
   310/68R
 3
    310/90
 3
    318/138
 3
    415/111
 3
    417/205
 3
    417/410.3
 2
    29/596
 2
    29/598
 2
   180/65.7
 2
    180/65.8
 2
    277/318
 2
    277/375
 2
    277/408
 2
    310/115
 2
    310/156.36
 2
    310/162
 2
    310/179
 2
    310/185
 2
    310/89
 2
    318/539
 2
    324/166
 2
    360/133
 2
    366/89
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384/110

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384/448
     415/113
     415/176
  2
     415/199.5
  2
     415/229
  2
     415/230
     415/231
415/26
415/49
  2
  2
  2
     416/114
416/96A
  2
  2
  2
     416/97R
     417/203
417/269
  2
  2
  2
     417/423.12
  2
     417/45
  2
     417/462
  2
     417/486
  2
     418/201.1
  2
     425/379.1
  2
     433/126
Combined Classifications
  9 318/254
  6 310/268
  6
    310/42
    310/90
    123/216
    123/242
    310/114
     310/49R
     310/67R
     360/98.07
     29/598
     310/112
    360/99.08
  3
      29/596
  3
      60/487
  3
      91/485
  3
    310/162
  3
    310/198
 3
    310/68R
 3
     318/138
 3
     360/97.03
 3
    415/111
 3
    417/205
 3
     417/410.3
 3
     417/462
 3
     418/201.1
 2
     123/450
 2
     180/65.7
 2
     180/65.8
 2
     267/140.12
 2
     267/140.13
 2
     277/318
 2
     277/375
 2
     277/408
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2

310/115 310/156.32

- 2 310/156.36 2 310/166 2 310/178 2 310/179
- 2 310/185 2 310/254
- 2 310/261
- 2 310/40MM
- 2 310/68B
- 2 310/89
- 2 318/139
- 2 318/466
- 2 318/539
- 2 318/696
- 2 318/701
- 2 318/773
- 2 322/32
- 2 324/161
- 2 324/166
- 2 360/133
- 2 366/147
- 2 366/84
- 2 366/89
- 2 384/107
- 2 384/110
- 2 384/448
- 2 415/108
- 2 415/112
- 2 415/113
- 2 415/115
- 2 415/176
- 415/199.5 2
- 2 415/229
- 415/230 2
- 415/231 2
- 2 415/26
- 415/49 2
- 2 416/114
- 2 416/96A
- 2 416/97R
- 2 417/203
- 2 417/204
- 2 417/269
- 2 417/42
- 2 417/423.12
- 2 417/45
- 2 417/486
- 2 425/379.1
- 2 433/126
- 433/132
- 494/37

10662348 CLSTITLES

Titles of Most Frequently Occurring Classifications of Patents Returned From A Search of 10662348 on June 14, 2004

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9 318/254
               (4 OR, 5 XR)
       Class
               318 : ELECTRICITY: MOTIVE POWER SYSTEMS
                     SELF-COMMUTATED IMPULSE OR RELUCTANCE MOTORS
       318/254
               (0 OR, 6 XR)
  310/268
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
       Class
       310/10
                    DYNAMOELECTRIC
                    .Rotary
       310/40R
                    ..Rotor structure
       310/261
       310/264
                     ...Armatures
       310/268
                     ....Disc
               (0 OR, 6 XR)
310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
  310/42
       Class
       310/10
                     DYNAMOELECTRIC
        310/40R
                     .Rotary
                     ..With assembling, metal casting or machining
        310/42
                        feature
                (3 OR, 3 XR)
 310/90
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
       Class
        310/10
                     DYNAMOELECTRIC
                    .Rotary
        310/40R
                    ..With other elements
        310/66
                     ...Bearing or air-gap adjustment or bearing
        310/90
                        lubrication
                (4 OR, 1 XR)
5 123/216
        Class
               123 : INTERNAL-COMBUSTION ENGINES
        123/200
                     ROTARY
        123/216
                     .With charge treatment means
                (1 OR, 4 XR)
 123/242
        Class 123 : INTERNAL-COMBUSTION ENGINES
        123/200
                     ROTARY
                     .With compression, combustion, and expansion in
        123/241
                         a single variable volume
        123/242
                      ..Planetating rotor
                (1 OR, 4 XR)
5 310/114
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
                     DYNAMOELECTRIC
        310/10
        310/40R
                     .Rotary
        310/114
                     ..Plural rotary elements
  310/49R
                (4 OR, 1 XR)
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                     DYNAMOELECTRIC
        310/40R
                     .Rotary
        310/46
                     ..Magnetic motors
        310/49R
                     ...Step-by-step
5 310/67R
                (1 OR, 4 XR)
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                      DYNAMOELECTRIC
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10662348 CLSTITLES

.Rotary 310/40R 310/66 ..With other elements 310/67R ... Inbuilt or incorporated unit 5 360/98.07 (1 OR, 4 XR) Class 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL 360/88 RECORD TRANSPORT WITH HEAD STATIONARY DURING TRANSDUCING .Disk record 360/97.01 360/98.01 ..Plural disks 360/98.07 ...Rotational drive detail (2 OR, 2 XR) 29/598 029 : METAL WORKING Class METHOD OF MECHANICAL MANUFACTURE 29/592 .Electrical device making 29/592.1 29/596 ..Dynamoelectric machine 29/598 ...Rotor (0 OR, 4 XR) 310/112 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE Class 310/10 DYNAMOELECTRIC 310/40R .Rotary 310/112 ..Plural units, structurally united 360/99.08 (0 OR, 4 XR) 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR Class RETRIEVAL 360/88 RECORD TRANSPORT WITH HEAD STATIONARY DURING TRANSDUCING 360/97.01 .Disk record 360/99.08 .. Rotational drive detail 29/596 (1 OR, 2 XR) 029 : METAL WORKING Class 29/592 METHOD OF MECHANICAL MANUFACTURE 29/592.1 .Electrical device making 29/596 ..Dynamoelectric machine 3 60/487 (3 OR, 0 XR) Class 060 : POWER PLANTS 60/325 PRESSURE FLUID SOURCE AND MOTOR 60/487 .Input pump and rotary output motor system having displacement varying type of direction or speed selector 3 91/485 (0 OR, 3 XR) 091 : MOTORS: EXPANSIBLE CHAMBER TYPE Class 91/472 THREE OR MORE CYLINDERS ARRANGED IN PARALLEL RADIAL OR CONICAL RELATIONSHIP WITH ROTARY TRANSMISSION 91/484 .Control valve seating surface contact maintained by fluid pressure bias 91/485 ..Disc valve 310/162 (1 OR, 2 XR) Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE 310/10 DYNAMOELECTRIC

10662348 CLSTITLES 310/40R .Rotary ..A.C. 310/159 310/162 ...Synchronous (0 OR, 3 XR) 3 310/198 Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE DYNAMOELECTRIC 310/10 .Rotary 310/40R ..Windings and core structure 310/179 ...Armature or primary 310/195 310/198Plural windings (0 OR, 3 XR) 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE 3 310/68R Class 310/10 DYNAMOELECTRIC .Rotary 310/40R ..With other elements 310/66 ... Electric circuit elements 310/68R (0 OR, 3 XR) 318 : ELECTRICITY: MOTIVE POWER SYSTEMS 318/138 Class SPACE-DISCHARGE-DEVICE COMMUTATED MOTOR 318/138 360/97.03 (3 OR, 0 XR) 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR Class RETRIEVAL RECORD TRANSPORT WITH HEAD STATIONARY DURING 360/88 TRANSDUCING 360/97.01 .Disk record .. Environmental control (e.g., air filter, 360/97.02 temperature control) ...Plural disks 360/97.03 3 415/111 (0 OR, 3 XR) Class 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS WITH LUBRICATING, SEALING, PACKING OR BEARING 415/110 MEANS HAVING INTERNAL WORKING FLUID CONNECTION (E.G., FL UID OR FLUID BIASED SEAL, ETC.) 415/111 .For shaft sealing, packing, lubricating or bearing means 3 417/205 (0 OR, 3 XR) Class 417: PUMPS 417/199.1 DIVERSE PUMPS 417/205 .Series 417/410.3 (0 OR, 3 XR) Class 417 : PUMPS MOTOR DRIVEN 417/321 417/410.1 .Electric or magnetic motor ..Rotary expansible chamber pump 417/410.3 3 417/462 (1 OR, 2 XR)

..Unidirectionally rotating cylinder

EXPANSIBLE CHAMBER TYPE

.Moving cylinder

Class 417 : PUMPS

417/437 417/460

417/462

10662348_CLSTITLES

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(1 OR, 2 XR)
    418/201.1
         Class 418: ROTARY EXPANSIBLE CHAMBER DEVICES
                      INTERENGAGING ROTATING MEMBERS
          418/191
         418/201.1
                      .Helical or herringbone
   123/450
                  (1 OR, 1 XR)
                  123 : INTERNAL-COMBUSTION ENGINES
         Class
         123/434
                       CHARGE FORMING DEVICE (E.G., POLLUTION CONTROL)
          123/445
                        .Fuel injection system
                        .. Fuel pump flow regulation
          123/446
                        ... Sequential distributor
          123/448
          123/450
                        ....Rotary distributor
                   (0 OR, 2 XR)
    180/65.7
          Class 180 : MOTOR VEHICLES
          180/54.1
                        POWER
          180/65.1
                        .Electric
          180/65.6
                        ..With gearing between electric motor and drive
                            wheel
          180/65.7
                        ... Gearing is a changeable ratio gearing
                   (0 OR, 2 XR)
  2
    180/65.8
                 180 : MOTOR VEHICLES
          Class
          180/54.1
                        POWER
          180/65.1
                        .Electric
                        .. With electronic devices (logic gates,
          180/65.8
                           semi-conductors, vacuum tubes, etc.) in control circuit
  2 267/140.12
                   (1 OR, 1 XR)
          Class
                  267 : SPRING DEVICES
                        RESILIENT SHOCK OR VIBRATION ABSORBER
          267/136
                        .Including energy absorbing means or feature
          267/140.11
                            (e.g., supplemental vehicle equipment, such as motor mou
nt,
                            seat, etc., including additional fluid or friction energ
У
                            absorber)
                        .. Having concentric coaxial spring between
          267/140.12
                           plural confining means for radial force
    267/140.13
                   (1 OR, 1 XR)
                  267 : SPRING DEVICES
          Class
          267/136
                        RESILIENT SHOCK OR VIBRATION ABSORBER
                        .Including energy absorbing means or feature
          267/140.11
                            (e.g., supplemental vehicle equipment, such as motor mou
nt,
                            seat, etc., including additional fluid or friction energ
У
                            absorber)
          267/140.13
                       ..Axial
    277/318
                   (0 OR, 2 XR)
          Class
                  277 : SEAL FOR A JOINT OR JUNCTURE
          277/317
                        SEAL COMBINED WITH INDICATOR, SAMPLER, OR
                            INSPECTION FEATURE
          277/318
                        .Fluid pressure
                   (0 OR, 2 XR)
  2 277/375
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10662348_CLSTITLES
               277 : SEAL FOR A JOINT OR JUNCTURE
                     SEAL BETWEEN RELATIVELY MOVABLE PARTS (I.E.,
        277/345
                            DYNAMIC SEAL)
                      .Relatively rotatable radially extending
        277/358
                            sealing face member (e.g., face, mechanical, etc.)
                      .. Installation, removal, assembly, disassembly,
        277/370
                           or repair feature
        277/371
                      ... Unitized seal assembly (e.g., cartridge,
                          etc.)
        277/375
                      ....Mounted in housing or casing
               (0 OR, 2 XR)
277 : SEAL FOR A JOINT OR JUNCTURE
2 277/408
        Class
                      SEAL BETWEEN RELATIVELY MOVABLE PARTS (I.E.,
                           DYNAMIC SEAL)
                      .Relatively rotatable radially extending
        277/358
                          sealing face member (e.g., face, mechanical, etc.)
                      ..Introduction, circulation, or removal of
        277/408
                         fluid
                 (0 OR, 2 XR)
2 310/115
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
                     DYNAMOELECTRIC
        310/10
        310/40R
                      .Rotary
                      ..Plural rotary elements
        310/114
                      ... Field and armature both rotate
        310/115
                 (1 OR, 1 XR)
 310/156.32
        Class
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
                     DYNAMOELECTRIC
        310/10
        310/40R
                      .Rotary
                      .. Permanent magnet machines
        310/152
                      ...Permanent magnet rotor
        310/156.01
        310/156.32
                     ....Including an axial air gap
2 310/156.36
                 (0 OR, 2 XR)
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                      DYNAMOELECTRIC
        310/40R
                      .Rotary
                      .. Permanent magnet machines
        310/152
                      ...Permanent magnet rotor
        310/156.01
                      ....Including an axial air gap
        310/156.32
                      .....With plural sets of rotating magnets
        310/156.36
2 310/166
                 (1 OR, 1 XR)
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                      DYNAMOELECTRIC
        310/40R
                      .Rotary
                      ..A.C.
        310/159
        310/166
                      ...Induction
  310/178
                 (1 OR, 1 XR)
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                      DYNAMOELECTRIC
        310/40R
                     .Rotary
                      ..D.C.
        310/177
                      ...Homopolar
        310/178
                 (0 OR, 2 XR)
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2 310/179

10662348 CLSTITLES Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE 310/10 DYNAMOELECTRIC .Rotary 310/40R ..Windings and core structure 310/179 (0 OR, 2 XR) 2 310/185 Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE DYNAMOELECTRIC 310/10 .Rotary 310/40R ..Windings and core structure 310/179 ...Field or excitation windings or structure 310/180 310/184Plural field windingsPlural sets of poles 310/185 (1 OR, 1 XR) 2 310/254 Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE DYNAMOELECTRIC 310/10 .Rotary 310/40R 310/254 ..Stator structure (1 OR, 1 XR)
Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE 2 310/261 DYNAMOELECTRIC 310/10 .Rotary 310/40R 310/261 ..Rotor structure (1 OR, 1 XR) 2 310/40MM Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE 310/10 DYNAMOELECTRIC 310/40R .Rotary 310/40MM ..Miniature motors (1 OR, 1 XR) 2 310/68B Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE DYNAMOELECTRIC 310/10 .Rotary 310/40R ..With other elements 310/66 ...Electric circuit elements 310/68R 310/68BCondition responsive (e.g., position, torque, etc.) 2 310/89 (0 OR, 2 XR) 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE Class 310/10 DYNAMOELECTRIC .Rotary 310/40R ..With other elements 310/66 310/85 ... Mechanical shields or protectors 310/89 Housings, windows or covers 318/139 (2 OR, 0 XR) Class 318 : ELECTRICITY: MOTIVE POWER SYSTEMS 318/139 BATTERY-FED MOTOR SYSTEMS 2 318/466 (2 OR, 0 XR) Class 318 : ELECTRICITY: MOTIVE POWER SYSTEMS AUTOMATIC AND/OR WITH TIME-DELAY MEANS (E.G.,

.Movement, position, or limit-of-travel

AUTOMATIC STARTING AND/OR STOPPING)

318/445

318/466

10662348_CLSTITLES

2	318/538	318	: ELECTRICITY: MOTIVE POWER SYSTEMS
2		318	OR, 1 XR) : ELECTRICITY: MOTIVE POWER SYSTEMS OPEN-LOOP STEPPING MOTOR CONTROL SYSTEMS
2	318/700	318	: ELECTRICITY: MOTIVE POWER SYSTEMS
2	Class 318/727	318	: ELECTRICITY: MOTIVE POWER SYSTEMS INDUCTION MOTOR SYSTEMS .Primary circuit control
2	322/32 Class 322/17	322	OR, 0 XR) : ELECTRICITY: SINGLE GENERATOR SYSTEMS AUTOMATIC CONTROL OF GENERATOR OR DRIVING MEANS
	322/29 322/32		.Speed or frequency of generatorFrequency responsive devices or networks
2		324	OR, 0 XR) : ELECTRICITY: MEASURING AND TESTING ELECTRICAL SPEED MEASURING .Speed comparing means
2	324/166 Class 324/160 324/166	324	: ELECTRICITY: MEASURING AND TESTING ELECTRICAL SPEED MEASURING
2	360/133 Class 360/131 360/132 360/133	360	OR, 2 XR) : DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL RECORD MEDIUM .In containerFor disk
2	366/147 Class 366/144 366/147	366	OR, 1 XR) : AGITATING WITH HEATING OR COOLING .Medium in stirrer or mixing chamber
2	366/84 Class 366/69 366/79 366/83 366/84	(1 366	OR, 1 XR) : AGITATING RUBBER OR HEAVY PLASTIC WORKING .Stirrer is through-pass screw conveyorPlural screw conveyors on separate shaftsIn parallel intercommunicating mixing chambers

10662348_CLSTITLES

(0 OR, 2 XK)
Class 366: AGITATING (0 OR, 2 XR) 2 366/89 RUBBER OR HEAVY PLASTIC WORKING 366/69 .Stirrer is through-pass screw conveyor 366/79 ..Varying diameter of shaft 366/89 .07 (1 OR, 1 XR) Class 384 : BEARINGS 2 384/107 ROTARY BEARING 384/91 384/100 .Fluid bearing 384/107 ..Radial and thrust 10 (0 OR, 2 XR) Class 384 : BEARINGS 2 384/110 ROTARY BEARING 384/91 .Fluid bearing ..Radial and thrust 384/100 384/107 384/110 ...Conical 48 (0 OR, 2 XR) Class 384 : BEARINGS 2 384/448 384/91 ROTARY BEARING 384/445 .Antifriction bearing 384/448 .. Sensor or inspection features; liquid metal or shipping protection features; bearing member integral with seal 2 415/108 (1 OR, 1 XR) Class 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS CASING AND SPACED HOUSING WITH SPACE VENTED TO 415/108 WORKING FLUID 2 415/112 (2 OR, 0 XR) Class 415: ROTARY KINETIC FLUID MOTORS OR PUMPS WITH LUBRICATING, SEALING, PACKING OR BEARING 415/110 MEANS HAVING INTERNAL WORKING FLUID CONNECTION (E.G., F LUID OR FLUID BIASED SEAL, ETC.) .For shaft sealing, packing, lubricating or 415/111 bearing means 415/112 ..With inlet and outlet connections (0 OR, 2 XR) Class 415: ROTARY KINETIC FLUID MOTORS OR PUMPS WITH LUBRICATING, SEALING, PACKING OR BEARING MEANS HAVING INTERNAL WORKING FLUID CONNECTION (E.G., F LUID OR FLUID BIASED SEAL, ETC.) 415/111 .For shaft sealing, packing, lubricating or bearing means 415/113 .. Fluid biased, movable or resilient portion 2 415/115 (2 OR, 0 XR) Class 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS 415/115 WITH PASSAGE IN BLADE, VANE, SHAFT OR ROTARY DISTRIBUTOR COMMUNICATING WITH WORKING FLUID 2 415/176 (0 OR, 2 XR) 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS Class

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	415/175	10662348_CLSTITLES INCLUDING ADDITIONAL MEANS CAUSING OR CONTROLLING FLUID FLOW FOR HEAT EXCHANGING, LUBRICATING
OR		SEALING
	415/176	.Means subjected to or is working fluid
2	415/199.5 (0 Class 415 415/182.1 415/198.1 415/199.4 415/199.5	: ROTARY KINETIC FLUID MOTORS OR PUMPS WORKING FLUID PASSAGE OR DISTRIBUTING MEANS ASSOCIATED WITH RUNNER (E.G., CASING, ETC.) .Plural rigidly related blade setsIncluding an axial-flow blade set
2	•	OR, 2 XR) S: ROTARY KINETIC FLUID MOTORS OR PUMPS BEARING, SEAL, OR LINER BETWEEN SHAFT OR SHAFT SLEEVE AND STATIC PART
2		OOR, 2 XR) S: ROTARY KINETIC FLUID MOTORS OR PUMPS BEARING, SEAL, OR LINER BETWEEN SHAFT OR SHAFT SLEEVE AND STATIC PART .Seal
2	415/231 (0 Class 415 415/229 415/230 415/231	S: ROTARY KINETIC FLUID MOTORS OR PUMPS BEARING, SEAL, OR LINER BETWEEN SHAFT OR SHAFT SLEEVE AND STATIC PART .Seal
2	415/26 (0 Class 415 415/13 415/26	O OR, 2 XR) 5: ROTARY KINETIC FLUID MOTORS OR PUMPS WITH CONTROL MEANS RESPONSIVE TO NON-CYCLIC CONDITION SENSING, CENTRIFUGAL ACTUATION OR TORQUE Responsive to moving member developed fluid force, current or pressure
2		O OR, 2 XR) 5: ROTARY KINETIC FLUID MOTORS OR PUMPS WITH CONTROL MEANS RESPONSIVE TO NON-CYCLIC CONDITION SENSING, CENTRIFUGAL ACTUATION OR TORQUE .Temperature or fluid force responsive member Fluid force responsive member controls working fluid
2		O OR, 2 XR) 5: FLUID REACTION SURFACES SUSTAINED ANCILLARY MOVEMENT OF ROTARY WORKING MEMBER (E.G., CYCLIC FEATHERING, ETC.) .Responsive to fixed actuator (e.g., cam or trip, etc.)Axial camSelectively adjustable
2	416/96A ((O OR, 2 XR)

10662348 CLSTITLES

Class 416: FLUID REACTION SURFACES

416/95 WITH HEATING, COOLING OR THERMAL INSULATION

MEANS

416/96R .Changing state mass within or fluid flow

through working member or carrier

416/96A ..Blade inserts

2 416/97R (0 OR, 2 XR)

Class 416: FLUID REACTION SURFACES

416/95 WITH HEATING, COOLING OR THERMAL INSULATION

MEANS

416/96R .Changing state mass within or fluid flow

through working member or carrier

416/97R ...Flow exhausted to working fluid

2 417/203 (0 OR, 2 XR)

Class 417 : PUMPS

417/199.1 DIVERSE PUMPS

417/201 .Including rotary nonexpansible chamber type

417/203 ..Preceding diverse pump

2 417/204 (2 OR, 0 XR)

Class 417 : PUMPS

417/199.1 DIVERSE PUMPS

417/204 .Moving partition or cylinder of rotary pump

forms or actuates reciprocating pump

2 417/269 (0 OR, 2 XR)

Class 417 : PUMPS

417/269 THREE OR MORE CYLINDERS ARRANGED IN PARALLEL,

RADIAL, OR CONICAL RELATIONSHIP WITH ROTARY TRANSMISSION

AXIS

2 417/42 (2 OR, 0 XR)

Class 417 : PUMPS

417/1 CONDITION RESPONSIVE CONTROL OF PUMP DRIVE

MOTOR

417/42 .In response to pump speed

2 417/423.12 (0 OR, 2 XR)

Class 417: PUMPS

417/321 MOTOR DRIVEN

417/410.1 .Electric or magnetic motor

417/423.1 .. Rotary motor and rotary nonexpansible chamber

pump

417/423.12 ... Having bearing

2 417/45 (0 OR, 2 XR)

Class 417 : PUMPS

417/1 CONDITION RESPONSIVE CONTROL OF PUMP DRIVE

MOTOR

417/44.1 .By control of electric or magnetic drive motor

417/45 ..By changing electrical characteristic of

motor or motor circuit

2 417/486 (0 OR, 2 XR)

Class 417 : PUMPS

417/437 EXPANSIBLE CHAMBER TYPE

10662348_CLSTITLES

417/486	.Plural	pumping	members	in	single	pump	chamber
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		•
2		: PLASTIC ARTICLE OR EARTHENWARE SHAPING OR TREATING: APPARATUS STOCK PRESSURIZING MEANS OPERABLY ASSOCIATED WITH DOWNSTREAM SHAPING ORIFICE .Including heating or cooling means
2	433/25	: DENTISTRY APPARATUS .Having motor or means to transmit motion from motor to tool (e.g., "engine")
2	433/25	: DENTISTRY APPARATUS .Having motor or means to transmit motion from motor to tool (e.g., "engine")
2	494/37 (1 Class 494 494/37	OR, 1 XR) : IMPERFORATE BOWL: CENTRIFUGAL SEPARATORS PROCESS

Butler, Douglas

From:

PLUS

Sent:

Wednesday, March 03, 2004 9:09 AM

To:

Butler, Douglas

Subject:

PLUS Results for 10662348

Here are the PLUS search results for 10662348.

This search was prepared by the staff of the Scientific and Technical Information Center, SIRA. If you have questions or comments about this search, please reply via email to PLUS@uspto.gov.

















10662348_CLSTITLES.t

10662348 LIST

PLUS Search Results for S/N 10662348, Searched March 03, 2004

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

5678786	4400659	4920293
4831298	4407258	4922406
4973233	4409505	4955791
5394283	4425883	4986740
5456653	4437213	5003686
4307309	4445822	5015149
4412796	4447220	5176261
4460319	4450813	5180225
·4506558	4455499	5197861
4619349	4461534	5215436
4628245	4468604	5216339
4632337	4477760	5228828
4759324	4479404	5231284
4800311	4481766	5231342
4834623	4491340	5237247
4858304	449716 7	5249918
4903497	4500269	5251833
4914335	4525123	5252039
5189323	4531079	5254918
5191250	RE31965	5257872
5214365	4534754	5259688
5334894	4535373	5269126
5346441	4544317	5273356
5373436	4553903	5279495
5418414	4557679	5289069
5481585	4562397	5295301
5518493	4562805	5309743
5681153	4562803	5315077
5706658	4564329	5320508
5804935	4570768	5329195
5844342	4575677	5333788
5983635	4577974	5334896
6005358	4577974	5340274
6109864	4611464	5350548
6133664	4616165	5350987
6200117	4626727	5354179
6210103	4756284	5355044
6210103	4773210	5357180
6226988	4784196	5374039
4249896	4795315	5382089
4257280	4830570	5402026
4267647	4831827	5417507
4274804	4837474	5424887
4276511	4847555	5427361
4292008	4853572	5430519
4319398	4854834	5452991
4327299	4866323	5455729
4329601	4880354	5471104
4379984	4881699	5480285
4388579	4900292	5489193

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10662348_CLS Most Frequently Occurring Classifications of Patents Returned From A Search of 10662348 on March 03, 2004

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Original Classifications
     123/216
     310/49R
     318/254
     60/487
     310/90
     360/97.03
  2
     29/598
  2
     318/139
  2
     318/466
  2
     318/701
  2
     322/32
  2
     324/161
  2
     415/112
  2
     415/115
  2
     417/204
  2
     417/42
     433/132
Cross-Reference Classifications
  6 310/268
    310/42
    318/254
    123/242
    310/112
    310/114
  4
    310/67R
    360/98.07
  4
    360/99.08
  3
     91/485
  3
    310/198
  3
    310/68R
    310/90
    318/138
    415/111
    417/205
    417/410.3
     29/596
     29/598
    180/65.7
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    180/65.8
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   277/318
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   277/375
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    277/408
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    310/115
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    310/156.36
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    310/162
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    310/179
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    310/185
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    310/89
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    318/539
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    324/166
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    360/133
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    366/89
    384/110
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- 2 384/448 2 415/113 2 415/176 2 415/199.5 2 415/229 2 415/230 2 415/231 2 415/26 2 415/49 2 416/114 2 416/96A 2 416/97R 2 417/203 2 417/269 2 417/423.12 2 417/45 2 417/462 2 417/486 418/201.1 2 2 425/379.1 433/126
- Combined Classifications
 - 9 318/254
 - 6 310/268
 - 6 310/42
 - 6 310/90
 - 5 123/216
 - 5 123/242
 - 5 310/114
 - 310/49R 5
 - 5 310/67R
 - 5 360/98.07
 - 29/598 4
 - 4 310/112
 - 4 360/99.08
 - 29/596 3
 - 60/487 3
 - 3 91/485
 - 3 310/162
 - 3 310/198
 - 3 310/68R
 - 3 318/138
 - 3 360/97.03
 - 3 415/111
 - 3 417/205
 - 3 417/410.3
 - 3 417/462
 - 3 418/201.1
 - 2 123/450
 - 2 180/65.7
 - 180/65.8
 - 2 267/140.12
 - 2 267/140.13
 - 2 277/318
 - 2 277/375
 - 2 277/408
 - 2 310/115
 - 310/156.32

10662348_CLS

2 310/156.36 2 310/166 2 310/178 2 310/179 2 310/185 2 310/254 2 310/261 2 310/40MM 2 310/68B 2 310/89 2 318/139 2 318/466 2 318/539 2 318/696 318/701 318/773 2 2 322/32 324/161 324/166 2 2 2 360/133 366/147 366/84 366/89 2 2 2 2 2 384/107 2 384/110 2 384/448 415/108 415/112 415/113 415/115 2 2 2 2 2 415/176 2 415/199.5 2 415/229 2 415/230 2 415/231 2 415/26 2 415/49 2 416/114 2 416/96A 2 416/97R 2 417/203 2 417/204 417/269 417/42 417/423.12 417/45 417/486 2 2 425/379.1

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433/126 433/132 494/37

10662348 CLSTITLES

Titles of Most Frequently Occurring Classifications of Patents Returned From A Search of 10662348 on March 03, 2004

```
9 318/254
                (4 OR, 5 XR)
       Class
               318 : ELECTRICITY: MOTIVE POWER SYSTEMS
                     SELF-COMMUTATED IMPULSE OR RELUCTANCE MOTORS
       318/254
 310/268
                (0 OR, 6 XR)
       Class
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
       310/10
                     DYNAMOELECTRIC
       310/40R
                     .Rotary
       310/261
                    ..Rotor structure
       310/264
                     ...Armatures
       310/268
                     ....Disc
 310/42
                (0 OR, 6 XR)
       Class
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
                    DYNAMOELECTRIC
       310/10
       310/40R
                     .Rotary
       310/42
                     .. With assembling, metal casting or machining
                        feature
  310/90
                (3 OR, 3 XR)
       Class
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
       310/10
                     DYNAMOELECTRIC
       310/40R
                    .Rotary
       310/66
                     ..With other elements
       310/90
                     ...Bearing or air-gap adjustment or bearing
                        lubrication
  123/216
               (4 OR, 1 XR)
               123 : INTERNAL-COMBUSTION ENGINES
       Class
       123/200
                     ROTARY
       123/216
                     .With charge treatment means
 123/242
                (1 OR, 4 XR)
       Class
               123 : INTERNAL-COMBUSTION ENGINES
       123/200
                     ROTARY
       123/241
                     .With compression, combustion, and expansion in
                         a single variable volume
       123/242
                     ..Planetating rotor
 310/114
               (1 OR, 4 XR)
       Class
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
       310/10
                   DYNAMOELECTRIC
       310/40R
                    .Rotary
       310/114
                    ..Plural rotary elements
 310/49R
               (4 OR, 1 XR)
       Class
              310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
       310/10
                    DYNAMOELECTRIC
       310/40R
                    .Rotary
       310/46
                    .. Magnetic motors
       310/49R
                    ...Step-by-step
 310/67R
                (1 OR, 4 XR)
       Class
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
       310/10
                    DYNAMOELECTRIC
```

Page 1

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10662348_CLSTITLES
        310/40R
                      .Rotary
        310/66
                      .. With other elements
        310/67R
                      ... Inbuilt or incorporated unit
  360/98.07
                 (1 OR, 4 XR)
        Class
                360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR
                        RETRIEVAL
        360/88
                      RECORD TRANSPORT WITH HEAD STATIONARY DURING
                            TRANSDUCING
        360/97.01
                     .Disk record
        360/98.01
                      ..Plural disks
        360/98.07
                      ...Rotational drive detail
    29/598
                 (2 OR, 2 XR)
        Class
                029 : METAL WORKING
        29/592
                    METHOD OF MECHANICAL MANUFACTURE
        29/592.1
                     .Electrical device making
        29/596
                     ..Dynamoelectric machine
        29/598
                     ...Rotor
                 (0 OR, 4 XR)
   310/112
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                     DYNAMOELECTRIC
        310/40R
                     .Rotary
        310/112
                      ..Plural units, structurally united
  360/99.08
                 (0 OR, 4 XR)
                360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR
        Class
                        RETRIEVAL
                      RECORD TRANSPORT WITH HEAD STATIONARY DURING
        360/88
                           TRANSDUCING
        360/97.01
                      .Disk record
        360/99.08
                      ..Rotational drive detail
    29/596
                (1 OR, 2 XR)
        Class
                029 : METAL WORKING
        29/592
                   METHOD OF MECHANICAL MANUFACTURE
        29/592.1
                    .Electrical device making
        29/596
                     ..Dynamoelectric machine
    60/487
                 (3 OR, 0 XR)
       Class
                060 : POWER PLANTS
        60/325
                     PRESSURE FLUID SOURCE AND MOTOR
        60/487
                      .Input pump and rotary output motor system
                         having displacement varying type of direction or speed
                         selector
    91/485
                 (0 OR, 3 XR)
       Class
                091 : MOTORS: EXPANSIBLE CHAMBER TYPE
       91/472
                     THREE OR MORE CYLINDERS ARRANGED IN PARALLEL
                          RADIAL OR CONICAL RELATIONSHIP WITH ROTARY TRANSMISSION
       91/484
                      .Control valve seating surface contact
                         maintained by fluid pressure bias
       91/485
                      ..Disc valve
3 310/162
                (1 OR, 2 XR)
       Class
               310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
       310/10
                     DYNAMOELECTRIC
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10662348_CLSTITLES
          310/40R
                        .Rotary
          310/159
                       ..A.C.
          310/162
                        ... Synchronous
  3 310/198
                  (0 OR, 3 XR)
          Class
                 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
          310/10
                       DYNAMOELECTRIC
          310/40R
                       .Rotary
                       ..Windings and core structure
          310/179
          310/195
                       ...Armature or primary
          310/198
                       ....Plural windings
                   (0 OR, 3 XR)
   310/68R
         Class
                 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
          310/10
                       DYNAMOELECTRIC
          310/40R
                       .Rotary
          310/66
                       ..With other elements
         310/68R
                       ... Electric circuit elements
    318/138
                  (0 OR, 3 XR)
          Class
                 318 : ELECTRICITY: MOTIVE POWER SYSTEMS
          318/138
                        SPACE-DISCHARGE-DEVICE COMMUTATED MOTOR
    360/97.03
                  (3 OR, 0 XR)
                 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR
         Class
                          RETRIEVAL
          360/88
                        RECORD TRANSPORT WITH HEAD STATIONARY DURING
                             TRANSDUCING
          360/97.01
                       .Disk record
          360/97.02
                        .. Environmental control (e.g., air filter,
                            temperature control)
          360/97.03
                        ...Plural disks
    415/111
                  (0 OR, 3 XR)
         Class
                 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS
          415/110
                        WITH LUBRICATING, SEALING, PACKING OR BEARING
                           MEANS HAVING INTERNAL WORKING FLUID CONNECTION (E.G., FL
UID
                           OR FLUID BIASED SEAL, ETC.)
          415/111
                        .For shaft sealing, packing, lubricating or
                           bearing means
    417/205
                   (0 OR, 3 XR)
         Class 417: PUMPS
          417/199.1
                      DIVERSE PUMPS
          417/205
                       .Series
    417/410.3
                 (0 OR, 3 XR)
         Class
                 417 : PUMPS
         417/321
                      MOTOR DRIVEN
          417/410.1
                      .Electric or magnetic motor
         417/410.3
                      .. Rotary expansible chamber pump
    417/462
                  (1 OR, 2 XR)
         Class
                 417 : PUMPS
         417/437
                       EXPANSIBLE CHAMBER TYPE
         417/460
                       .Moving cylinder
         417/462
                        .. Unidirectionally rotating cylinder
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418/201.1
                   (1 OR, 2 XR)
                  418 : ROTARY EXPANSIBLE CHAMBER DEVICES
          Class
          418/191
                        INTERENGAGING ROTATING MEMBERS
                        .Helical or herringbone
          418/201.1
                   (1 OR, 1 XR)
    123/450
          Class
                  123 : INTERNAL-COMBUSTION ENGINES
          123/434
                        CHARGE FORMING DEVICE (E.G., POLLUTION CONTROL)
          123/445
                        .Fuel injection system
          123/446
                        .. Fuel pump flow regulation
          123/448
                        ...Sequential distributor
          123/450
                        ....Rotary distributor
                   (0 OR, 2 XR)
   180/65.7
                  180 : MOTOR VEHICLES
          Class
          180/54.1
                        POWER
          180/65.1
                        .Electric
          180/65.6
                        .. With gearing between electric motor and drive
          180/65.7
                        ... Gearing is a changeable ratio gearing
    180/65.8
                   (0 OR, 2 XR)
          Class
                  180 : MOTOR VEHICLES
          180/54.1
                        POWER
          180/65.1
                        .Electric
          180/65.8
                        .. With electronic devices (logic gates,
                           semi-conductors, vacuum tubes, etc.) in control circuit
                   (1 OR, 1 XR)
    267/140.12
                  267 : SPRING DEVICES
          Class
                        RESILIENT SHOCK OR VIBRATION ABSORBER
          267/136
          267/140.11
                        .Including energy absorbing means or feature
                             (e.g., supplemental vehicle equipment, such as motor mou
nt,
                            seat, etc., including additional fluid or friction energ
У
                            absorber)
          267/140.12
                        .. Having concentric coaxial spring between
                           plural confining means for radial force
     267/140.13
                   (1 OR, 1 XR)
          Class
                  267 : SPRING DEVICES
          267/136
                        RESILIENT SHOCK OR VIBRATION ABSORBER
          267/140.11
                        .Including energy absorbing means or feature
                             (e.g., supplemental vehicle equipment, such as motor mou
nt,
                            seat, etc., including additional fluid or friction energ
У
                            absorber)
          267/140.13
                        ..Axial
    277/318
                   (0 OR, 2 XR)
                  277 : SEAL FOR A JOINT OR JUNCTURE
                        SEAL COMBINED WITH INDICATOR, SAMPLER, OR
          277/317
                            INSPECTION FEATURE
          277/318
                        .Fluid pressure
  2 277/375
                   (0 OR, 2 XR)
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10662348 CLSTITLES
                277 : SEAL FOR A JOINT OR JUNCTURE
                      SEAL BETWEEN RELATIVELY MOVABLE PARTS (I.E.,
        277/345
                             DYNAMIC SEAL)
                      .Relatively rotatable radially extending
        277/358
                            sealing face member (e.g., face, mechanical, etc.)
                      ...Installation, removal, assembly, disassembly,
        277/370
                           or repair feature
                      ... Unitized seal assembly (e.g., cartridge,
        277/371
                          etc.)
        277/375
                      .... Mounted in housing or casing
                 (0 OR, 2 XR)
 277/408
                277 : SEAL FOR A JOINT OR JUNCTURE
        Class
                      SEAL BETWEEN RELATIVELY MOVABLE PARTS (I.E.,
        277/345
                           DYNAMIC SEAL)
                      .Relatively rotatable radially extending
        277/358
                          sealing face member (e.g., face, mechanical, etc.)
                      .. Introduction, circulation, or removal of
        277/408
                         fluid
2 310/115
                 (0 OR, 2 XR)
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                      DYNAMOELECTRIC
        310/40R
                      .Rotary
                      ..Plural rotary elements
        310/114
                      ... Field and armature both rotate
        310/115
                (1 OR, 1 XR)
 310/156.32
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                      DYNAMOELECTRIC
        310/40R
                      Rotary
        310/152
                      ..Permanent magnet machines
        310/156.01
                      ...Permanent magnet rotor
        310/156.32
                      ....Including an axial air gap
                 (0 OR, 2 XR)
 310/156.36
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                      DYNAMOELECTRIC
        310/40R
                      .Rotary
                      .. Permanent magnet machines
        310/152
        310/156.01
                      ...Permanent magnet rotor
                      ....Including an axial air gap
        310/156.32
        310/156.36
                      .....With plural sets of rotating magnets
                 (1 OR, 1 XR)
  310/166
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        Class
        310/10
                      DYNAMOELECTRIC
        310/40R
                      .Rotary
        310/159
                      ..A.C.
        310/166
                      ...Induction
  310/178
                 (1 OR, 1 XR)
        Class
                310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE
        310/10
                      DYNAMOELECTRIC
        310/40R
                      .Rotary
                      ..D.C.
        310/177
                      ... Homopolar
        310/178
  310/179
                 (0 OR, 2 XR)
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10662348 CLSTITLES Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE DYNAMOELECTRIC 310/10 310/40R .Rotary ..Windings and core structure 310/179 (0 OR, 2 XR) 310/185 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE Class DYNAMOELECTRIC 310/10 310/40R .Rotary 310/179 ..Windings and core structure ...Field or excitation windings or structure 310/180Plural field windings 310/184Plural sets of poles 310/185 (1 OR, 1 XR) 2 310/254 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE Class 310/10 DYNAMOELECTRIC 310/40R .Rotary 310/254 ..Stator structure 2 310/261 (1 OR, 1 XR) 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE Class 310/10 DYNAMOELECTRIC 310/40R .Rotary 310/261 ..Rotor structure 310/40MM (1 OR, 1 XR) 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE Class 310/10 DYNAMOELECTRIC 310/40R .Rotary 310/40MM ..Miniature motors 310/68B (1 OR, 1 XR) Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE 310/10 DYNAMOELECTRIC 310/40R .Rotary ..With other elements 310/66 ... Electric circuit elements 310/68R 310/68BCondition responsive (e.g., position, torque, etc.) (0 OR, 2 XR) 310/89 Class 310 : ELECTRICAL GENERATOR OR MOTOR STRUCTURE DYNAMOELECTRIC 310/10 310/40R .Rotary 310/66 ..With other elements 310/85 ...Mechanical shields or protectors 310/89 Housings, windows or covers 318/139 (2 OR, 0 XR) 318 : ELECTRICITY: MOTIVE POWER SYSTEMS Class 318/139 BATTERY-FED MOTOR SYSTEMS (2 OR, 0 XR) 318 : ELECTRICITY: MOTIVE POWER SYSTEMS

318/445

318/466

AUTOMATIC AND/OR WITH TIME-DELAY MEANS (E.G.,

AUTOMATIC STARTING AND/OR STOPPING)

.Movement, position, or limit-of-travel

10662348_CLSTITLES

366/84In parallel intercommunicating mixing				10662348_CLSTITLES
Class 318 ELECTRICITY: MOTIVE POWER SYSTEMS	2	Class 318/538	318	MOTOR STRUCTURE ADJUSTMENT OR CONTROL Both armature and field structures rotatable
Class 318 ELECTRICITY: MOTIVE POWER SYSTEMS 318/701 Hysteresis or reluctance motor systems	2	Class	318	: ELECTRICITY: MOTIVE POWER SYSTEMS
Class 318 ELECTRICITY: MOTIVE POWER SYSTEMS 318/727 INDUCTION MOTOR SYSTEMS 318/772 Pirmary circuit control Plural speed Pole changing .	2	Class	318	: ELECTRICITY: MOTIVE POWER SYSTEMS
Class 322 : ELECTRICITY: SINGLE GENERATOR SYSTEMS AUTOMATIC CONTROL OF GENERATOR OR DRIVING M 322/32Frequency responsive devices or networks 2 324/161 (2 OR, 0 XR) Class 324 : ELECTRICITY: MEASURING AND TESTING 324/160 .Speed comparing means 2 324/166 (0 OR, 2 XR) Class 324 : ELECTRICITY: MEASURING AND TESTING 324/160 .Including speed-related frequency generated systems and selectrical speed Measuring and Testing 324/160 .Including speed-related frequency generated systems and selectrical speed Measuring and Testing 324/160 .Including speed-related frequency generated systems and systems and speed systems and systems are speed systems and syste	2	Class 318/727 318/767	318	: ELECTRICITY: MOTIVE POWER SYSTEMS INDUCTION MOTOR SYSTEMS .Primary circuit control
322/32Frequency responsive devices or networks 2 324/161 (2 OR, 0 XR)	2	Class	322	: ELECTRICITY: SINGLE GENERATOR SYSTEMS
Class 324 : ELECTRICITY: MEASURING AND TESTING 324/160		322/29 322/32		<pre>.Speed or frequency of generatorFrequency responsive devices or networks</pre>
Class 324 : ELECTRICITY: MEASURING AND TESTING 324/160	2	Class 324/160	324	: ELECTRICITY: MEASURING AND TESTING ELECTRICAL SPEED MEASURING
Class 360: DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL 360/131 RECORD MEDIUM 360/132 .In container 360/133For disk 2 366/147 (1 OR, 1 XR) Class 366: AGITATING 366/144 WITH HEATING OR COOLING 366/147 .Medium in stirrer or mixing chamber 2 366/84 (1 OR, 1 XR) Class 366: AGITATING 366/69 RUBBER OR HEAVY PLASTIC WORKING 366/79 .Stirrer is through-pass screw conveyor 366/83In parallel intercommunicating mixing	2	Class	324	: ELECTRICITY: MEASURING AND TESTING
Class 366: AGITATING 366/144 WITH HEATING OR COOLING 366/147 .Medium in stirrer or mixing chamber 2 366/84 (1 OR, 1 XR) Class 366: AGITATING 366/69 RUBBER OR HEAVY PLASTIC WORKING 366/79 .Stirrer is through-pass screw conveyor 366/83In parallel intercommunicating mixing	2	Class 360/131 360/132	360	: DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL RECORD MEDIUM .In container
Class 366: AGITATING 366/69 RUBBER OR HEAVY PLASTIC WORKING 366/79 .Stirrer is through-pass screw conveyor 366/83Plural screw conveyors on separate shafts 366/84In parallel intercommunicating mixing	2	Class 366/144	366	: AGITATING WITH HEATING OR COOLING
chambers	2	Class 366/69 366/79 366/83		: AGITATING RUBBER OR HEAVY PLASTIC WORKING .Stirrer is through-pass screw conveyorPlural screw conveyors on separate shafts

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2 366/89
                  (0 OR, 2 XR)
         Class
                 366 : AGITATING
         366/69
                   RUBBER OR HEAVY PLASTIC WORKING
          366/79
                      .Stirrer is through-pass screw conveyor
         366/89
                      .. Varying diameter of shaft
  2 384/107
                 (1 OR, 1 XR)
         Class
                 384 : BEARINGS
                  ROTARY BEARING
         384/91
         384/100
                      .Fluid bearing
         384/107
                      ..Radial and thrust
  2 384/110
                 (0 OR, 2 XR)
         Class 384 : BEARINGS
                  ROTARY BEARING
         384/91
         384/100
                      .Fluid bearing
          384/107
                      ..Radial and thrust
                      ...Conical
         384/110
  2 384/448
                 (0 OR, 2 XR)
         Class 384 : BEARINGS
         384/91
                      ROTARY BEARING
         384/445
                      .Antifriction bearing
          384/448
                       .. Sensor or inspection features; liquid metal
                          or shipping protection features; bearing member integral
                          with seal
  2 415/108
                  (1 OR, 1 XR)
         Class
                 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS
                       CASING AND SPACED HOUSING WITH SPACE VENTED TO
         415/108
                          WORKING FLUID
   415/112
                  (2 OR, 0 XR)
                 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS
         415/110
                       WITH LUBRICATING, SEALING, PACKING OR BEARING
                            MEANS HAVING INTERNAL WORKING FLUID CONNECTION (E.G., F
LUID
                            OR FLUID BIASED SEAL, ETC.)
         415/111
                        .For shaft sealing, packing, lubricating or
                           bearing means
         415/112
                       .. With inlet and outlet connections
  2 415/113
                  (0 OR, 2 XR)
         Class
                 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS
                       WITH LUBRICATING, SEALING, PACKING OR BEARING
MEANS HAVING INTERNAL WORKING FLUID CONNECTION (E.G., F
         415/110
LUID
                            OR FLUID BIASED SEAL, ETC.)
         415/111
                       .For shaft sealing, packing, lubricating or
                           bearing means
         415/113
                       ..Fluid biased, movable or resilient portion
                 (2 OR, 0 XR)
         Class 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS
                       WITH PASSAGE IN BLADE, VANE, SHAFT OR ROTARY
                          DISTRIBUTOR COMMUNICATING WITH WORKING FLUID
  2 415/176
                 (0 OR, 2 XR)
                 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS
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OR	415/175	10662348_CLSTITLES INCLUDING ADDITIONAL MEANS CAUSING OR CONTROLLING FLUID FLOW FOR HEAT EXCHANGING, LUBRICATING
OK .	415/176	SEALING .Means subjected to or is working fluid
2		ASSOCIATED WITH RUNNER (E.G., CASING, ETC.) .Plural rigidly related blade setsIncluding an axial-flow blade set
2	/	OR, 2 XR) : ROTARY KINETIC FLUID MOTORS OR PUMPS BEARING, SEAL, OR LINER BETWEEN SHAFT OR SHAFT SLEEVE AND STATIC PART
2		OR, 2 XR) : ROTARY KINETIC FLUID MOTORS OR PUMPS BEARING, SEAL, OR LINER BETWEEN SHAFT OR SHAFT SLEEVE AND STATIC PART .Seal
2	415/231 (0 Class 415 415/229 415/230 415/231	OR, 2 XR) : ROTARY KINETIC FLUID MOTORS OR PUMPS BEARING, SEAL, OR LINER BETWEEN SHAFT OR SHAFT SLEEVE AND STATIC PART .SealResiliently biased
2		OR, 2 XR) : ROTARY KINETIC FLUID MOTORS OR PUMPS WITH CONTROL MEANS RESPONSIVE TO NON-CYCLIC CONDITION SENSING, CENTRIFUGAL ACTUATION OR TORQUE .Responsive to moving member developed fluid force, current or pressure
2		OR, 2 XR) : ROTARY KINETIC FLUID MOTORS OR PUMPS WITH CONTROL MEANS RESPONSIVE TO NON-CYCLIC CONDITION SENSING, CENTRIFUGAL ACTUATION OR TORQUE .Temperature or fluid force responsive member Fluid force responsive member controls working fluid
2		OR, 2 XR) : FLUID REACTION SURFACES SUSTAINED ANCILLARY MOVEMENT OF ROTARY WORKING MEMBER (E.G., CYCLIC FEATHERING, ETC.) .Responsive to fixed actuator (e.g., cam or trip, etc.)Axial camSelectively adjustable
2	416/96A (0	OR, 2 XR)

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Class 416 : FLUID REACTION SURFACES

416/95 WITH HEATING, COOLING OR THERMAL INSULATION

MEANS

416/96R .Changing state mass within or fluid flow

through working member or carrier

416/96A ..Blade inserts

2 416/97R (0 OR, 2 XR)

Class 416 : FLUID REACTION SURFACES

416/95 WITH HEATING, COOLING OR THERMAL INSULATION

MEANS

416/96R .Changing state mass within or fluid flow

through working member or carrier

416/97R ...Flow exhausted to working fluid

2 417/203 (0 OR, 2 XR)

Class 417 : PUMPS

417/199.1 DIVERSE PUMPS

.Including rotary nonexpansible chamber type

417/203 .. Preceding diverse pump

2 417/204 (2 OR, 0 XR)

Class 417 : PUMPS

417/199.1 DIVERSE PUMPS

.Moving partition or cylinder of rotary pump

forms or actuates reciprocating pump

2 417/269 (0 OR, 2 XR)

Class 417 : PUMPS

417/269 THREE OR MORE CYLINDERS ARRANGED IN PARALLEL,

RADIAL, OR CONICAL RELATIONSHIP WITH ROTARY TRANSMISSION

AXIS

2 417/42 (2 OR, 0 XR)

Class 417 : PUMPS

417/1 CONDITION RESPONSIVE CONTROL OF PUMP DRIVE

MOTOR

417/42 .In response to pump speed

2 417/423.12 (0 OR, 2 XR)

Class 417 : PUMPS

417/321 MOTOR DRIVEN

417/410.1 .Electric or magnetic motor

417/423.1 .. Rotary motor and rotary nonexpansible chamber

pump

417/423.12 ...Having bearing

2 417/45 (0 OR, 2 XR)

Class 417 : PUMPS

417/1 CONDITION RESPONSIVE CONTROL OF PUMP DRIVE

MOTOR

417/44.1 .By control of electric or magnetic drive motor

417/45 .. By changing electrical characteristic of

motor or motor circuit

2 417/486 (0 OR, 2 XR)

Class 417 : PUMPS

417/437 EXPANSIBLE CHAMBER TYPE

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4	17/486	.Plural	pumping	members	in	single	pump	chamber

2	425/376.1	: PLASTIC ARTICLE OR EARTHENWARE SHAPING OR TREATING: APPARATUS STOCK PRESSURIZING MEANS OPERABLY ASSOCIATED WITH DOWNSTREAM SHAPING ORIFICE .Including heating or cooling means
2	433/25	: DENTISTRY APPARATUS .Having motor or means to transmit motion from motor to tool (e.g., "engine")
2	433/25	B: DENTISTRY APPARATUS .Having motor or means to transmit motion from motor to tool (e.g., "engine")Hand-held tool or handpiece
2	494/37 (3 Class 494 494/37	L OR, 1 XR) 4 : IMPERFORATE BOWL: CENTRIFUGAL SEPARATORS PROCESS